

CLAIMS

1. A method for automatically configuring a mass storage system for measuring system performance, the system comprising a plurality of disk storage elements, each element having at least one hyper and connected to a disk storage controller, the disk storage
5 controller being connected to at least one host computer, the host computer defining a plurality of logical units (LUN's), the storage controller defining in its configuration a front-end hierarchy and a back-end hierarchy, the method comprising

balancing assignments of LUN's across the back-end hierarchy, and

marginally balancing assignments of disk drive elements and hypers of the disk drive
10 elements across the back-end hierarchy.
2. The method of claim 1 wherein said balancing assignments across the back-end hierarchy maintains the assignment at any level of the back-end hierarchy within one assignment value.
3. A method for automatically configuring a mass storage system for measuring system
15 performance, the system comprising a plurality of disk storage elements, each element having at least one hyper and connected to a disk storage controller, the disk storage controller being connected to at least one host computer, the host computer defining a plurality of logical units (LUN's), the storage controller defining in its configuration a front-end hierarchy and a back-end hierarchy, the method comprising

20 balancing assignments of components of the back-end hierarchy to LUN's of the front-end hierarchy, and

marginally balancing said assignment.
4. The method of claim 3 wherein said balancing assignments across the back-end hierarchy maintains the assignment at any level of the back-end hierarchy within one
25 assignment value.

5. Software stored on a computer readable medium, to perform the function of automatically configuring a mass storage system for measuring system performance, the system comprising a plurality of disk storage elements, each element having at least one hyper and connected to a disk storage controller, the disk storage controller being connected to at least one host computer, the host computer defining a plurality of logical units (LUN's), the storage controller defining in its configuration a front-end hierarchy and a back-end hierarchy, the functions comprising

balancing assignments of LUN's across the back-end hierarchy, and

marginally balancing assignments of disk drive elements and hypers of the disk drive elements across the back-end hierarchy.

6. The software of claim 5 wherein said balancing assignments function, across the back-end hierarchy, maintains the assignment at any level of the back-end hierarchy within one assignment value.

7. Software stored on a computer readable medium to perform the functions of automatically configuring a mass storage system for measuring system performance, the system comprising a plurality of disk storage elements, each element having at least one hyper and connected to a disk storage controller, the disk storage controller being connected to at least one host computer, the host computer defining a plurality of logical units (LUN's), the storage controller defining in its configuration a front-end hierarchy and a back-end hierarchy, the functions comprising

balancing assignments of components of the back-end hierarchy to LUN's of the front-end hierarchy, and

marginally balancing said assignment.

8. The software of claim 7 wherein said balancing assignments function, across the back-end hierarchy, maintains the assignment at any level of the back-end hierarchy within one assignment value.